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EXAMINER

CHOL, PETER H

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3623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/036,200

Applicant(s)

OUCHI, NORMAN KEN

Examiner

PETER CHOI

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-24 and 26-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-24 and 26-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The following is a **FINAL** office action upon examination of application number 10/036,200. Claims 21-24 and 26-40 are pending in the application and have been examined on the merits discussed below.

Examiner Notes

2. Applicant is reminded that as per 37 CFR 1.121 (c.)(4)(i), no claim text shall be presented for any claim in the claim listing with the status of "canceled" or "not entered". Applicant has canceled claim 25 but claim text has been presented. Applicant is requested to submit all future claims in compliance with proper amendment practice as disclosed by 37 CFR 1.121 in order for the response to be considered in full compliance.

3. Based on the figures relied upon by the Applicant in the remarks section, it appears as though a route "segment" is equivalent to a sub-process of a node (i.e., an object step), as taught by Kim et al. The Examiner further notes that the Applicant claims that the second workflow means is separate from the first workflow. However, in Figure 2 submitted by the Applicant, "second segment", a part of a "second workflow", terminates at W2, which is a part of a "first workflow"; as the workflows are linked together through a mutual step, it is unclear how the workflow means are "separate" as claimed. Using the broadest reasonable interpretation of the claims, presuming Figure 1 submitted by the Applicant (purportedly representative of the Du reference cited) operates in a similar manner, in that a first and second workflow having a connected

sequence of object steps with associated route segments, each route segment connected to another route segment, and "second segment" (of the second workflow) terminates at W2.

4. The Examiner further notes that the specification refers to objects as being a step within an ERP system, and each route segment associated with an object refers to shop floor workflow steps. The specification further specifies that ERP routes are a linear sequence of steps while the shop floor workflow route has repair and test feedback loops.

Response to Amendment

5. In the response filed February 23, 2009, Applicant amended claims 21, 22, 24, 29, 30, 32-39, canceled claim 25, and added claim 40.

6. The previous rejection of claims 33-39 raised under 35 USC 112, 2nd paragraph, are withdrawn in view of the claim amendments submitted in the response filed February 23, 2009.

Response to Arguments

7. Applicant's arguments filed February 23, 2009 have been fully considered but they are not persuasive.

The Examiner is confused as to exactly what discussion points are being addressed by the Applicant and assumes that the "Summary" portion of the remarks is a

listing of said discussion points. Examiner notes that the remarks seem to be directed towards philosophical differences between the claimed invention and the cited prior art of record. However, the Examiner reminds Applicant that the prior art is not applied with respect to the specification, but rather the claims of the instant invention. The following response to the Applicant's arguments has been made according to the Examiner's best understanding of the arguments presented by Applicant.

Applicant argues that neither Du nor Kim teach forming a route for execution in a second workflow means from an object route for execution in a separate, independent, asynchronous first workflow means by associating each object step in the object route with a route segment and connecting the associated route segments in the sequence of the object steps where there may be connections not in the object route, including feedback connections.

The Examiner respectfully disagrees. Route segments of an object step are not claimed as being connected to route segments of other object steps. The claimed invention specifies that object steps have associated route segments connected to other route segments. This is taught by Kim [see at least Figures 11-13], wherein the object step "Sub Process 1" has an associated set of route segments identified as "Process 2", with each segment within "Process 2" being connected to another segment within "Process 2". Similarly, each segment in "Process 1" is connected to other route segments within "Process 1" (Start -> Activity 1 -> Sub Process 1 -> Activity 2 -> End).

Kim teaches sub-process routes, of which each step is associated with a route segment (all the steps within process 2 are part of sub-process 1, which is part of process 1). The workflow for process 1 and process 2 are separate, independent and asynchronous from each other [see Figure 13], wherein each object step is associated with a route segment

Applicant argues that neither Du nor Kim teach starting the object route in the first workflow and the route in the second workflow and completing the route in the second workflow and the object route in the first workflow.

The Examiner respectfully disagrees. The first object route connects all object steps, each object step having associated route segments connected to other route segments. Kim teaches sub-process routes, of which each step is associated with a route segment (all the steps within process 2 are part of sub-process 1, which is part of process 1) [Figure 12]. In Kim, the object route starts in the first workflow at the "Start" node, and is completed at the "End" node in "Process 1", which is an object route starting and ending in a first workflow.

Further, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., completing the object route in the first workflow) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that neither Du nor Kim teach the synchronization of information such as number of items completing a step in the route with a step in the object route.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., synchronizing information, number of items completing a step) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 21-24 and 26-40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 21 recites the newly amended limitation of "means to signal a second workflow means to start a route". However, this is not supported in the specification; the specification does not provide written description of any "means" to signal, nor signaling to start a route.

Similarly, claim 21 also recites the newly amended limitation of "means to signal the first workflow means the completion of a route". There is no written description in the specification of any "means" to signal, nor signaling upon completion of a route. Examiner notes however, the currently canceled claim 25 relates to a first route segment signaling a first object step when the first route segment completes directing the second workflow, the difference being signaling after completion versus signaling to represent completion. For example, "signaling after completion" may occur in real-time, whereas "signaling to represent completion" may be a signal generated as a result of a query to determine whether a route has been completed.

Claim 22 recites the newly amended limitation of a feedback connection, wherein "the feedback connection is not in the object route". However, this is not supported in the specification; the specification does not provide any written description of feedback connection that are not in object routes. The specification does not provide any written description for excluding certain types of connections or for feedback connections being excluded from certain routes.

Similarly, claim 29 recites the newly amended limitation of a feedback connection, wherein "the feedback connection is not in the first abstraction route". Claim 32 contains similar problems with the newly amended limitation of "connections among the steps of the route segments that are not in the connections of the object route". Claim 33 also contains similar deficiencies with the newly amended limitation of "where the object route does not provide a feedback connection". As noted in claim 22, the specification does not provide any written description for excluding certain types of connections or for feedback connections being excluded from certain routes.

Claims 23-24 and 26-28 are dependent on claim 1 and thus are also rejected. Claims 30-31 and 40 are dependent on claim 29 and thus are also rejected. Claims 33-39 are dependent on claim 32 and thus are also rejected.

Claim Rejections - 35 USC § 101

10. Claims 21-24, 26-31 and 40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

11. Claims 21-24, 26-31 and 40 are rejected under 35 U.S.C. 101 based on Supreme Court precedent, and recent Federal Circuit decisions, the Office's guidance to examiners is that a § 101 process must (1) be tied to a particular machine or apparatus or (2) transform underlying subject matter (such as an article or materials) to a different

state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780,787-88 (1876). If neither of these requirements is met by the claim, the method is not a patent eligible process under 35 U.S.C. 101 and is non-statutory subject matter.

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state. Nominal recitations of structure in an otherwise ineligible method fail to make the method a statutory process. The use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility. See *Benson*, 409 U.S. at 71-72. Further, the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity. See *Flook*, 437 U.S. at 590. Incidental physical limitations, such as data gathering, field of use limitations, and extra-solution activity is not enough to convert an abstract idea into a statutory process. In other words, nominal or token recitations of structure in a method claim do not convert an otherwise ineligible claim into an eligible one.

In the instant case, the apparatus used to accomplish the claimed method steps is not disclosed; it is unclear whether the steps are performed by a computer processor or performed within the mind of a human user. The determination of whether a claimed step is statutory is not on whether said step can or may be automated (i.e., using a computer or processor to perform an otherwise mental step), but rather that a specific machine imposes meaningful limits on the claim's scope. Independent claims 21 and 29 recite steps for generating workflow routes for implementation. Although the generated workflow routes may be intended to be physically realized within a computer or processor, there is no actual recitation of a computer or processor executing the claimed workflow/object routes. Even though claims 21 and 29 recite a step of "executing" an object route using a workflow, execution need not be performed by a computer or processor. Further, neither a computer nor processor are ever explicitly or inherently recited by the claimed invention as defined by claims 21 and 29. Dependent claims 22-24, 26-28, 30-31 and 39 merely add further details of the workflow coordination method recited in claims 21 and 29 without including any tie to another statutory category or particular machine nor any transformation of subject matter into a different state or thing.

Here, applicant's method steps, fail the first prong since they are not tied to a particular machine and can be performed without the use of a particular machine or apparatus. Similarly, the applicant's method steps fail the second prong because they do not result in a transformation of subject matter into another state or thing. Thus,

claims 21-24, 26-31 and 40 are non-statutory.

Official Notice

12. In the previous Office Action mailed May 5, 2006, notice was taken by the Examiner that certain subject matter is old and well known in the art. Per MPEP 2144.03(c), these statements are taken as admitted prior art because no traversal of this statement was made in the subsequent response. Specifically, it has been taken as prior art that:

- Workflow can be applied to a plurality of work processes, including manufacturing and production
- It is old and well known in the art that bar code readers and radio frequency (RFID) tags are amongst the plurality of input/output devices that are used in business procedure
- Bar codes and RFID tags are beneficial in that they enable companies to track, manage, and monitor the real-time status of and whereabouts of inventory, especially in the manufacturing process. They also give valuable information about the quantity of products being bought or received
- It is old and well known in the art to connect a plurality of networked computers to the Internet

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 21-24, and 26-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Du et al. (US Patent #5,826,239) in view of Kim et al. (US 2002/0065701).

As per claim 21, Du et al. teaches a method for forming a route from an object route and coordinating a first workflow directed by the object route with a second workflow directed by the route and separate from the first workflow, the method comprising:

(a) providing a first object step **{W1} (representing process activities in business objects to create new workflow processes by assembling business objects to describe workflow processes)** with an associated first route segment **{forward arc connecting to W2} (business object is a representation of something active in the business domain, including its business name and definition, attribute, behavior and constraints. It provides a uniform way to encapsulate legacy systems and applications and a direct mapping, in understandable business terms, between the business model and the possibly sophisticated operational procedures of the workflow process system)**, a sequence of steps

(each workflow process includes a sequence of activities) to be connected to other route segments **{W1 is connected to W2 by a route segment}** **(some aspects of the workflow process can be preplanned and deliberately structured; parts of the workflow process involving certain departments can be preplanned)** [Column 6, lines 40-41, Column 7, lines 11-17, Column 10, lines 23-34, Figure 7];

(b) providing a second object step **{W2}** with an associated second route segment **{the arc between W1 and W2, the forward arc between W2 and R3}**, a sequence of steps to be connected to other route segments **{W2 is connected to R3 by a route segment}** [Figure 7];

(c) providing a first workflow means directed by an object route, a sequence of object steps **{W1, W2, W5, W6, W7, W8}** **(each workflow process 18 includes a sequence of activities, each of which is ordinarily performed by one of the computer systems 12a-d in conjunction with an associated user 14a-b or machine 15a-b; the specific structure and flow of each workflow process can be preplanned; parts of the workflow process involving certain departments can be preplanned; a workflow process is a description of the sequencing, timing, dependency, data, physical agent allocation, business rule and organization policy enforcement requirements of business activities needed to enact work; A work node 41 is a placeholder for a process activity, which is a logical representation of a piece of work contributing towards the accomplishment of a process 18. A process activity is mapped to the invocation of an operation on business objects during the execution of the process...A process activity**

definition includes a forward activity and optionally, a compensation activity, a cancel activity, a resource management activity, timeout and deadline information and input and output data) with means to signal a second workflow means to start a route {at rule node 8, the first route segment is completed and event 3 (138) is raised, which leads to the beginning of 124} (status information of each process instance and load information can be queried using the process status monitor modules via the process status monitoring interface; In OpenPM, a rule node contains a list of condition-action rules, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs) [Column 6, lines 40-43, Column 7, lines 4-5 and 16-17, Column 8, lines 11-15, 45-58, Figure 7, Column 7, lines 59-67, Column 19, lines 60-67];

(d) means to signal the first workflow means the completion of a route **{at rule node 8, the first route segment is completed and event 3 (138) is raised, which leads to the beginning of 124} (status information of each process instance and load information can be queried using the process status monitor modules via the process status monitoring interface; In OpenPM, a rule node contains a list of condition-action rules, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs) [Figure 7, Column 7, lines 59-67, Column 19, lines 60-67];**

(e) defining a first object route **{W1, W2, W5, W6, W7, W8}**, a sequence of object steps **(each workflow process includes a sequence of activities; workflow process is specified by the process design modules via the workflow process definition interface)**, including the first object step and second object step, providing conditional branches, parallel paths, and loops such that all connected object steps are included **(The workflow process 18 can span several business organizations with multiple activities potentially performed in parallel; reset arcs are used to support repetitions {i.e., loops} or explore alternatives {i.e., parallel paths} in a workflow process 18; In OpenPM, a rule node contains a list of condition-action rules {i.e., conditional steps/actions}, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs)** [Column 6, lines 40-52, Column 7, lines 59-67, Column 8, lines 31-32, Column 19, lines 60-67, Figure 7];

the method further providing

(f) forming a first route **{W1, W2, R3, W5, R5, W6, R6, W7, R7, W8, R8}** from the first object route **{W1, W2, W5, W6, W7, W8}**, by connecting the route segments associated with each object step **{forward arcs and reset arcs between nodes}**, including the first route segment and second route segment **{W1, W2}**, in the sequence of the object steps of the first object route **(workflow process is represented as a directed graph consisting of a set of nodes connected by arcs; work nodes represent activities to be performed and rule nodes are used to specify workflow**

processes that are more complex than a simple sequence) [Column 8, lines 15-17, 45-47, and 59-61, Figure 7];

(g) providing the first object route to direct the first workflow means **{the workflow process represented by Figure 7 is “provided”, or applied to the HP OpenPM engine for execution}** [Figure 7, Column 9, lines 36-43];

(h) providing the first route to direct the second workflow means, starting the first workflow to execute the first object route, which signals the second workflow to start the first route, and the second workflow completes the first route, and the first workflow completes the first object route **{the workflow process represented by Figure 7 is “provided”, or applied to the HP OpenPM engine}** [Figure 7, Column 9, lines 36-43].

As per (f) and (h), Du et al. does not explicitly teach separate workflow routes in which routes are not connected or reliant on one another.

Further, Du et al. does not explicitly teach the step of (d) defining a second workflow means, separate, independent, and operating asynchronous from the first workflow means, directed by a route, a sequence of steps.

However, Kim et al. teaches the use of exception paths, a different (i.e., separate, not connected or reliant on another route) path from the regular transition path taken when the deadline is passed [Paragraph 164], as well as asynchronous execution of sub-processes [Figure 13, Paragraphs 169, 172, and 173, where a sub-process

activity is initiated manually or automatically when the workflow reaches the sub-process activity, and the child process starts its execution when the workflow of the parent process reaches the sub-process activity... unlike the synchronous option, the parent process continues the activities following the sub-process activity, without waiting for the completion of the child process].

Du et al. is directed towards workflow management, namely in definition and creating workflow processes and sequences. Similarly, Kim et al. is directed towards modeling and executing a business process workflow. Thus, Du et al. and Kim et al. are deemed to be analogous references within the context of defining and managing workflow processes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Du et al. to include independent and asynchronous workflow routes, as taught by Kim et al., because doing so enhances the teachings of Du et al. by supporting a workflow process between any number of application systems in any number of locations, as well as allowing any number of parallel but independent workflow processes to be initiated in response to a notification that a particular transaction has occurred, and further enables processes to be executed without waiting for the completion of child or parent processes, as taught by Kim et al. [Paragraph 173], which leads to improved processing time and efficiency.

As per claim 22, Du et al. teaches the method of claim 21, wherein a second object step with an associated third route segment follows the second object step in the

sequence of object steps of the first object route (**forward arcs represent the normal execution flow of process activities and form a directed acyclic graph. Successful completion of a node at the source end of a forward arc triggers the starting of the node at the destination end of the forward arc; also see the arrow pointed connections linking each of the rule nodes and work nodes**) and the third route segment provides a feedback connection to the second route segment in forming the first route (**reset arcs are used to support repetitions or explore alternatives in a workflow process. Reset arcs differ from forward arcs in that they reach backwards in the process graph; also see the dashed connection between rule nodes R3, R6 and R7 in Figure 7**) [Column 8, lines 26-34, Figure 7].

Although not explicitly taught by Du et al., Kim et al. teaches the use of feedback connections to connect object steps that are not in an object route {**see at least Figures 11-13, where the connections between the steps of the “route segments” comprising Sub Process 1/Process 2 are not in the connections of the object route of Process 1**}.

As noted above, Du et al. and Kim et al. are deemed to be analogous references within the context of defining and managing workflow processes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Du et al. so that route segments are connected with connections not in the connections of the object route steps, as taught by Kim et al., because doing so

enhances the teachings of Du et al. by supporting a workflow process between any number of application systems in any number of locations, as well as allowing any number of parallel but independent workflow processes to be initiated in response to a notification that a particular transaction has occurred, and further enables processes to be executed without waiting for the completion of child or parent processes, as taught by Kim et al. [Paragraph 173], which leads to improved processing time and efficiency.

As per claim 23, Du et al. teaches the method of claim 21 wherein the first object step with an associated fourth route segment as an alternative route segment such that either the first route segment or the fourth route segment is selected when forming the first route **{in Figure 7, rule node 3 may be proceeded by either rule node 2 or work node 4}** [Figure 7].

As per claim 24, although not explicitly taught by Du et al., Kim et al. teaches the method of claim 21 wherein the route segments are connected in the sequence of the object route steps with connections not in the connections of the object route steps of object route **{see at least Figures 11-13, where the connections between the steps of the “route segments” comprising Sub Process 1/Process 2 are not in the connections of the object route of Process 1}**.

As noted above, Du et al. and Kim et al. are deemed to be analogous references within the context of defining and managing workflow processes. Therefore, it would

have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Du et al. so that route segments are connected with connections not in the connections of the object route steps, as taught by Kim et al., because doing so enhances the teachings of Du et al. by supporting a workflow process between any number of application systems in any number of locations, as well as allowing any number of parallel but independent workflow processes to be initiated in response to a notification that a particular transaction has occurred, and further enables processes to be executed without waiting for the completion of child or parent processes, as taught by Kim et al. [Paragraph 173], which leads to improved processing time and efficiency.

As per claims 26-28, Du et al. teaches the step of querying status information of each process instance and load information by using the process status modules via the process status monitoring interface [Column 7, lines 63-67], as well as storing a list of condition-action rules, where the condition is a Boolean expression of values such as the execution status of previous nodes, the time at which each inward arc was fired, and other data used in the process instance, while the action fires outgoing arcs [Column 19, lines 60-67].

Du et al. does not explicitly teach the use of barcode and radio frequency identifiers. However, it has been admitted as prior art, as a result of improperly and/or untimely challenged Official Notice, that it is old and well known in the art that bar code readers and radio frequency (RFID) tags are amongst the plurality of input/output

devices that are used in business procedure. Bar codes and RFID tags are beneficial in that they enable companies to track, manage, and monitor the real-time status of and whereabouts of inventory, especially in the manufacturing process. They also give valuable information about the quantity of products being bought or received. Therefore, one of ordinary skill in the art at the time of invention would modify the teachings of Du et al. to include barcodes and radio frequency identifiers to obtain the benefits of said identifiers to track, manage and monitor the real-time status of inventory within established workflow processes.

Claims 29-31 recite limitations already addressed by the rejection of claims 21-23 above; therefore, the same rejections apply.

Claims 32-39 recite limitations already addressed by the rejection of claims 21-28 above, respectively; therefore, the same rejections apply.

In addition, as per claim 32, Du et al. provides a [computer] system and method for distributed resource management in a computer network [Column 6, lines 19-20, network 11] that includes multiple computers operating under control of workflow management software systems [Column 4, lines 38-43]. Du et al. also implements the HP OpenPM workflow management system, an open, enterprise-capable, object-oriented workflow process management system to manage business activities that support complex enterprise processes in a distributed, heterogeneous computing

environment [Column 7, lines 24-29]. The core of the HP OpenPM system is the HP OpenPM engine, which enables the HP OpenPM engine to interact with workflow process designer, workflow process instance execution, workflow process monitor, resource management and business object management modules [Column 7, lines 45-52].

Kim et al. further teaches connections among the steps of the route segments that are not in the connections of the object route **{see at least Figures 11-13, where the connections between the steps of the “route segments” comprising Sub Process 1/Process 2 are not in the connections of the object route of Process 1}.**

As noted above, Du et al. and Kim et al. are deemed to be analogous references within the context of defining and managing workflow processes. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Du et al. so that route segments are connected with connections not in the connections of the object route steps, as taught by Kim et al., because doing so enhances the teachings of Du et al. by supporting a workflow process between any number of application systems in any number of locations, as well as allowing any number of parallel but independent workflow processes to be initiated in response to a notification that a particular transaction has occurred, and further enables processes to be executed without waiting for the completion of child or parent processes, as taught by Kim et al. [Paragraph 173], which leads to improved processing time and efficiency.

Claim 40 recites limitations already addressed by the rejection of claim 22 above; therefore, the same rejection applies.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ward (US Patent #7,020,618) teaches creating workflows and service plans using a plurality of predefined "structured sentences" combined together to create a workflow process of each of a plurality of services.

Ohmura et al. (US Patent #6,151,583) teaches developing and managing workflow processes having sub-processes.

Bandat et al. (US Patent #6,816,902) teaches a workflow comprising separate, interrelating sub-workflows called "islands".

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER CHOI whose telephone number is (571)272-6971. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Boswell can be reached on (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 4, 2009

/P. C./
Examiner, Art Unit 3623
/Jonathan G. Sterrett/

Primary Examiner, Art Unit 3623